B.S. in BIOCHEMISTRY AND MOLECULAR BIOLOGY

BIOCHEMISTRY OPTION

MAJOR REQUIREMENTS

PRESCRIBED COURSES-C OR HIGHER\(^1\)

- □ CHEM 110, 3 units\(^2\)
- □ CHEM 111, 3 units
- □ CHEM 112, 3 units\(^2\)
- □ MATH 140, 4 units\(^2\)

A “C” or better is required in 2 of the following 3 courses. **All 3 courses required:**

- □ BMB/MICRB 251, 3 units
- □ BMB/MICRB 252, 3 units
- □ MICRB 201, 3 units

PRESCRIBED COURSES

- □ BIOL 322 or 222, 3 units
- □ BMB 400, 2 units
- □ BMB 401, 3 units
- □ BMB 402, 3 units
- □ BMB 442, 3 units
- □ BMB 443W, 3 units
- □ BMB 445W or 448, 2 units
- □ CHEM 113, lunit
- □ CHEM 210, 3 units
- □ CHEM 212, 3 units
- □ CHEM 213, 2 units
- □ MATH 141, 4 units
- □ MICRB 202 or 203, 2 units

Minimum overall GPA requirement for graduation must be > 2.0. Total units earned (less repeats and remedial) must equal 125 to graduate. At least 36 of the last 60 units must be completed at the university, and the last 60 units within the past 5 calendar years.

\(^1\)A student enrolled in this major must receive a grade of “C” or better in the courses listed in this category specified by Senate Policy 82-44.

\(^2\)Course is ETM Requirement. Students must receive a C or better grade in all ETM courses prior to entering the major in addition to having a GPA of 2.0 or better.

OPTION REQUIREMENTS (MCB)

- □ BMB 474, 3 units
- □ CHEM 450, 3 units
- □ CHEM 452, 3 units
- □ PHYS 211, 4 units
- □ PHYS 212, 4 units
- □ PHYS 213, 2 units
- □ PHYS 214, 2 units

400-LEVEL SELECTIONS

Select 7-9 units from any 400-level BMB, MICRB, CHEM, or LIST D (see BMB web site) courses with a total max. of 4 units in BMB 496 and/or BMB 488 and a total max. of 3 units in BMB 408 and/or MICRB 408.

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MATHEMATICAL SCIENCE (DEPARTMENT LIST B)

Select 2-4 units from CMPSC 101 (3), 102 (3), 121 (3), 200 (3), 201 (3); MATH 220 (2), 230 (4), 231 (2), 250 (3), 251 (4); STAT 200 (4), 240 (3), 250 (3), 301 (3), 401 (3).

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Earn a “C” or higher in 9 units of any 400-level MICRB/ BMB courses **except** BMB 442, 443W, 445W, 448, 496, MICRB 421W, 422 and 447.

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LIST C FREE ELECTIVES\(^3\)

Select 7-10 units from department list:

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\(^3\)With the EXCEPTION of the courses listed below, ALL courses appearing in the University Bulletin are acceptable as elective courses: 6 units of ROTC may be applied toward graduation requirements. Students **MAY NOT** fulfill this requirement with lower level or general education courses in math and science (including but not limited to examples such as: any BI SC course, any BMB course below the 100 level, MATH 110 and 111, and the like). Students **MAY NOT** fulfill this requirement with courses that significantly repeat material from courses required for the major, (including but not limited to examples such as: CHEM 202 or 203 after taking CHEM 210 or 212, or vice-versa; PHYS 250 or 251 after taking PHYS 211,212,213, and 214, or vice-versa; and so forth). Students **MAY NOT** fulfill this requirement with remedial courses (including but not limited to examples such as: LL ED 5 and 10; ENGL 4, 5, and 6; ESL 4 and 5; CHEM courses below CHEM 110; MATH courses below MATH 110; STAT 100; PHYS courses below PHYS 211 ; and the like).
GENERAL EDUCATION REQUIREMENTS

KNOWLEDGE DOMAINS (must total 30 units)

Natural Sciences (GN), 9 units
- CHEM 110 & 111, 4 units
- CHEM 112 & 113, 4 units
- PHYS 211 or 250, 4 units

Arts (GA), 6 units
(3 units must NOT be inter-domain*)
- GA
- GA

Humanities (GH), 6 units
(3 units must NOT be inter-domain*)
- GH
- GH

Social and Behavioral Sciences (GS), 6 units
(3 units must NOT be inter-domain*)
- GS
- GS

Health and Wellness (GHW), 3 units
(3 units must NOT be inter-domain*)
- GHW
- GHW

Additional Knowledge Domain Courses, 0-6 units
- Additional Knowledge Domain Courses
- Additional Knowledge Domain Courses

FOUNDATIONS Grades of C or better required

Writing and Speaking (GWS), 9 units
- ENGL 15, 3 units
- CAS 100, 3 units
- ENGL 202 (C preferred), 3 units

Quantification (GQ), 6 units
- MATH 140, 4 units
- MATH 141 or List B Selection, 2-4 units

ADDITIONAL UNIVERSITY REQUIREMENTS
The following requirements can overlap/double count with Knowledge Domain Courses or major requirements.

First-Year Seminar (FYS), 1 unit
- PSU 16, 1 unit

US Cultures (US), 3 units

International Cultures (IL), 3 units

Writing Across the Curriculum (WAC), 3 units

Integrative Studies (IS), 6 units
Must be two (paired) Linked courses (Z-suffix), or two (distinct) Inter-domain* courses (N-suffix)

*Inter-domain courses* span across two different Knowledge Domains. One inter-domain course may count as 3 units toward each Domain, but 30 distinct units of Knowledge Domain courses (GN/GA/GH/GS/GHW) are required in total.

*Move-3 Substitution:* A student may choose to shift 3 units of courses from the GN, GA, GH, or GS categories to either GN, GA, GH, GS, or GHW categories with the approval of an Academic Adviser.